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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,639	09/28/2005	Johan Nilsson	P13872US3	7140

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EXAMINER	
CHAN, RICHARD	
ART UNIT	**PAPER NUMBER**
2618	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/528,639	NILSSON, JOHAN	
	Examiner	Art Unit	
	Richard Chan	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 March 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17 and 19-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-7,9-12,15,17,19-23,25-28,31 and 33* is/are rejected.

7)☐ Claim(s) *8,13,14,16,24,29,30 and 32* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see page 9 of 10, filed 3/9/07, with respect to the rejection(s) of claim(s) 1 under 35 U.S.C 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Ariyoshi (US 2002/0021682).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ling (US 5,216,692) in view of Ariyoshi (US 2002/0021682).

With respect to claim 1, Ling discloses the method for controlling a radio frequency (RF) transmitter 114, the method comprising: using an integrating controller 306 to produce a reference value Pref. of a first quality measure p(n) from a first error signal produced by 104; producing an estimated value of the first quality measure relating to an actual value of the first quality measure (Col.7 lines 33-34); and supplying a tracking signal related to the estimated value of the first quality measure and the

reference value of a first quality measure to the integrating controller (Col.7 lines 52-57), however the Ling reference does not disclose wherein the first error signal is based on a reference value P(ref) of a second quality measure and an estimated value of the second quality measure.

The Ariyoshi reference, Fig.1 however disclose wherein the first error signal though demodulator 130 is based on a reference value of a second quality measure, from SIR measuring portion 120 and an estimated value of the second quality measure. (Paragraph 0029-0033) and Fig.3 (Paragraph 0036-0037)

It would have been obvious to one of ordinary skill in the art to implement the multiple loops of signal measuring modules as disclosed by Ariyoshi to the transmitter as disclosed by Ling in order to obtain SIR values and implement such values and compared the BLER values to output a received signal.

With respect to claim 3, Ling and Ariyoshi combined discloses the method as claimed in claim 1, Ariyoshi continues to disclose wherein the first error signal is the difference between the reference value of the second quality measure and the estimated value of the second quality measure. (Col.7 lines 39-45)

With respect to claim 4, Ling and Ariyoshi combined discloses the method as claimed in claim 1, however Ling continues to disclose wherein the second quality measure is one of block error rate (BLER), bit error rate (BER), frame error rate (FER), a number of iterations performed by a decoder, or a value based on reliability of

decision statistics. (Col.3 lines 59-64)

With respect to claim 5, Ling and Ariyoshi combined discloses method as claimed in claim 1, however Ariyoshi continues to disclose wherein the tracking signal is the difference between the reference value of the first quality measure and the estimated value of the first quality measure. (Paragraph 0029-0033)

With respect to claim 6, Ling and Ariyoshi combined disclose the method as claimed in claim 5, however Ariyoshi continues to disclose wherein the first quality measure is a signal to interference ratio (SIR). (Paragraph 0029-0033)

With respect to claim 9, Ling and Ariyoshi combined disclose the method as claimed in claim 1, however Ariyoshi continues to disclose wherein the reference value of the second quality measure is set to produce a desired actual value of the second quality measure of the received signal. (Paragraph 0029-0033)

With respect to claim 10, Ling and Ariyoshi combined disclose the method as claimed in claim 1, however Arisyoshi continues to disclose wherein the reference value of the first quality measure is set to produce a desired actual value of the first quality measure of the received signal. (Paragraph 0029-0033)

With respect to claim 11, Ling and Ariyoshi combined disclose the method as claimed in claim 1, however Ariyoshi continues to disclose wherein the reference value Pref of the first quality measure is set to produce a command indicative of a desired change in transmission power. (Paragraph 0029-0033)

With respect to claim 12, Ling and Ariyoshi combined disclose in Fig.1 the method as claimed in claim 1, however Ling continues to disclose wherein the tracking signal is filtered right after being signal is received by antenna on base station 100 before being supplied to the integrating controller. (Col.7 lines 52-57)

With respect to claim 15, Ling and Ariyoshi combined disclose the method as claimed in claim 1, however Ling continues to disclose wherein the integrating controller is operable to not update the integrator if the tracking signal indicates that an update would not be advisable. The Ling reference does not update the power control algorithm unless the signal meets the threshold value. (Col.7 lines 52-57)

With respect to claim 17, Ling discloses the controller 306 for controlling a radio frequency (RF) transmitter 114, the method comprising: an integrating controller operable to produce a reference value Pref of a first quality measure from a first error signal; an estimator 104 operable to produce an estimated value P(n) of the first quality measure relating to an actual value of the first quality measure; (Col.7 lines 33-34) and a tracking unit operable to supply a tracking signal related to the estimated value of the

first quality measure and the reference value of a first quality measure to the integrating controller (Col.7 lines 52-57) however the Ling reference does not disclose wherein the first error signal is based on a reference value P(ref) of a second quality measure and an estimated value of the second quality measure.

The Ariyoshi reference, Fig.1 however disclose wherein the first error signal though demodulator 130 is based on a reference value of a second quality measure, from SIR measuring portion 120 and an estimated value of the second quality measure. (Paragraph 0029-0033) and Fig.3 (Paragraph 0036-0037)

It would have been obvious to one of ordinary skill in the art to implement the multiple loops of signal measuring modules as disclosed by Ariyoshi to the transmitter as disclosed by Ling in order to obtain SIR values and implement such values and compared the BLER values to output a received signal.

With respect to claim 19, Ling and Ariyoshi combined disclose the controller 306 as claimed in claim 18, Ariyoshi discloses wherein the first error signal is the difference between the reference value of the second quality measure and the estimated value of the second quality measure. (Paragraph 0029-0033)

With respect to claim 20, Ling and Ariyoshi combined disclose the controller as claimed in any one of claims 17, Ariyoshi continues to disclose wherein the second quality measure is one of block error rate (BLER), bit error rate (BER), frame error rate (FER), a number of iterations performed by a decoder, or a value based on reliability of

decision statistics. (Paragraph 0029-0033)

With respect to claim 21, Ling and Ariyoshi combined disclose the controller as claimed in claim 17, Ariyoshi continues to disclose wherein the tracking signal is the difference between the reference value of the first quality measure and the estimated value of the first quality measure. (Paragraph 0029-0033)

With respect to claim 22, Ling and Ariyoshi combined disclose the controller as claimed in any one of claims 17, Ariyoshi continues to disclose wherein the first quality measure is a signal to interference ratio (SIR). (Paragraph 0029-0033)

With respect to claim 25, Ling and Ariyoshi combined disclose the controller as claimed in claim 17, Ariyoshi wherein the reference value of the second quality measure is set to produce a desired actual value of the second quality measure of the received signal. (Paragraph 0029-0033)

With respect to claim 26, Ling and Ariyoshi combined disclose the controller as claimed in claim 17, Ariyoshi continues to disclose wherein the reference value of the first quality measure is set to produce a desired actual value of the first quality measure of the received signal. (Paragraph 0029-0033)

With respect to claim 27, Ling and Ariyoshi combined disclose the controller 306 as claimed in claim 17, Ling continues to disclose wherein the reference value of the first quality measure is set to produce a command indicative of a desired change in transmission power. (Col.7 lines 39-45)

With respect to claim 28, Ling and Ariyoshi combined disclose the controller 306 in Fig.1 as claimed in claim 17, Ling continues to disclose wherein the tracking unit is operable to filter the tracking signal right after being signal is received by antenna on base station 100 before being supplied to the integrating controller. (Col.7 lines 52-57)

With respect to claim 31, Ling and Ariyoshi combined disclose the controller as claimed in claim 17, Ling continues to disclose wherein the integrating controller is operable to not update the integrator if the tracking signal indicates that an update would not be advisable. . The Ling reference does not update the power control algorithm unless the signal meets the threshold value. (Col.7 lines 52-57)

3. Claims 7 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ling (US 5,216,692) in view of Ariyoshi (US 2002/0021682) and in further view of Munks (US 6,353,623) .

With respect to claim 7, Ling discloses the method as claimed in claim 1, however Ling does not specifically disclose wherein the integrating controller is one of a

proportional integrating (PI) controller or a proportional integrating derivative (PID) controller.

The Munks reference Fig.6 however discloses the use of a PID control stage 102 for controlling the error signal regarding the temperature set circuit.

It would have been obvious to one of ordinary skill in the art to implement a proportional integrating derivative controller in order to control the reference signal to be compared to the measured incoming signal.

The Ling and Munks references are analogous art because both references deal with the control of a reference value being compared to a measured value by the control system.

With respect to claim 23, Ling discloses the controller as claimed in claim 17, wherein the integrating controller is one of a proportional integrating (PI) controller or a proportional integrating derivative (PID) controller.

The Munks reference Fig.6 however discloses the use of a PID control stage 102 for controlling the error signal regarding the temperature set circuit.

It would have been obvious to one of ordinary skill in the art to implement a proportional integrating derivative controller in order to control the reference signal to be compared to the measured incoming signal.

The Ling and Munks references are analogous art because both references deal with the control of a reference value being compared to a measured value by the control

system.

Allowable Subject Matter

4. Claims 8, 13, 14, 16, 24, 29, 30, and 32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

With respect to claim 8, Ling and Munks combined disclose the method as claimed in claim 7, however the prior art does not disclose wherein the PI controller has the transfer function: SIR r = e * K + 1 s .times. (e * K T i + e s T t) in which SIR.sub.r is the reference value of the first quality measure, e is the error in quality measure, K is a constant, e.sub.s is the tracking signal and T.sub.i and T.sub.t are time constants relating to the integration and tracking unit respectively.

With respect to claim 13, Lin g discloses the method as claimed in claim 1, however the prior art does not disclose wherein an adjusted tracking signal is set to zero when the tracking signal is within a predefined value range, the adjusted tracking signal being supplied to the integrating controller in place of the tracking signal.

Claim 14 is dependent on objected to claim 13.

With respect to claim 16, Ling discloses the method as claimed in claim 15, however the prior art does not disclose wherein the integrating controller is operable to

not update the integrator if the tracking signal indicates that the absolute value of the difference between the estimated value of the first quality measure.and the reference value of the first quality measure is larger than a threshold.

With respect to claim 24, Ling and Munks combined discloses the controller as claimed in claim 23, however the prior art does not disclose wherein the PI controller has the transfer function: SIR r = e * K + 1 s .times. (e * K T i + e s T t) in which SIR.sub.r is the reference value of the first quality measure, e is the error in quality measure, K is a constant, e.sub.s is the tracking signal and T.sub.i and T.sub.t are time constants relating to the integration and tracking unit respectively.

With respect to claim 29, Ling discloses the controller as claimed in claim 17, however the prior art does not specifically disclose wherein the tracking unit is operable to produce an adjusted tracking signal which is set to zero when the tracking signal is within a predefined value range, the adjusted tracking signal being applied in place of the tracking signal.

Claim 30 is dependent on objected claim 29.

With respect to claim 32, Ling discloses the controller as claimed in claim 31, however the prior art does not specifically disclose wherein the integrating controller is operable to not update the integrator of the tracking signal indicates that the absolute

value of the difference between the estimated value of the first quality measure and the reference value of the first quality measure is larger than a threshold.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Chan whose telephone number is (571) 272-0570. The examiner can normally be reached on Mon - Fri (9AM - 5PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571)272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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5/23/07

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